

In This Issue:

- [What Makes a Good Root Cause Analysis, Part II](#)
- [Best Practices: Teamwork: The Salem Hospital Experience](#)
- [Journal Brief: Predicting Adverse Events](#)
- [Heard on the Net: Patient-Owned Equipment](#)
- [In the News: NYC Hospitals Lower Infection Rates](#)
- [From the Commission](#)
- [Upcoming Events](#)

Our North Star Goal:

Oregon will have the safest health care system in the country by 2010.

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From the Reporting Program:

What Makes a Good Root Cause Analysis (RCA), Part II

In this second of three brief notes on root cause analysis (RCA), we focus on matching action plans to the identified root causes. Part I described the first element of an effective RCA: drill down in understanding the contributing factors until the most basic (root) cause/causes are found. Part III will address the third element: an investigation that fosters full information and consideration of the data collected.

- II. **Root Cause/Action Plan Match** - This refers to developing action plans that are clearly linked to the system or organizational factors identified as root causes of an event. According to the VA National Center for Patient Safety (NCPS), actions *must specifically address the root cause/contributing factor*.



The retained object example in last month's newsletter noted that the RCA drill down revealed several deeper issues related to not following policy: lack of clarity about which miscellaneous items require a count; communication of informal practice to count this particular item not relayed to new nurse; and inconsistency between informal practices and formal policies. In this case, matching causes and actions might look something like:

- Lack of clarity <—> Develop miscellaneous item count checklist
- Informal practice not communicated <—> Review/revise orientation manual and develop staff resource book
- Inconsistent policies/practices <—> Implement "[Red Rule](#)" regarding trimming off radio-opaque markers

These action plans are in the "Intermediate" and "Stronger" categories of action plans developed by the NCPS (see [Actions & Outcomes tab in RCA Tools](#)). Intermediate and Stronger action plans go beyond the "Train/Educate" type of action plans by providing some concrete support for individual staff, including explicit senior leadership support. Training and educating have a place in action plans, but should be used in moderation as the sole or primary response to correct identified causal factors. Along with policy development, they are best in a supportive role to other, stronger action plans. Reliance on train/educate type of action plans in response to an event might also serve as a signal that the root cause is still unidentified. [Return to Top](#)

Best Practices: Teamwork - The Salem Hospital Experience

Last month's newsletter included abstracts from two articles that indicated developing and sustaining teamwork was a difficult undertaking. An [article](#) in May's *International Journal for Quality in Health Care* reports on a more successful effort in changing behavior and attitudes, although the authors do not describe the organizational efforts supporting team behavior after the training.

This month we describe the successful efforts at Salem Hospital to improve communication and teamwork among three distinct units: Postpartum, Neonatal ICU, and Labor & Delivery. Led by Judy Marvin, MD, Director of Women's Services, Salem Hospital's senior leaders, clinical leaders, and staff embarked on a four-step process toward the goal of eliminating silos and developing a sense of team for giving care to women and their babies.

1. The first step was a two-day offsite meeting of clinical and senior leaders to plan the implementation. This included a hard, objective look at commitment and ability to make the change successful. The group used a prospective tool designed to determine project readiness. The tool identifies four elements that influence successful project completion: Duration, Integrity, Commitment (senior and local level), and Effort; it is described in an Harvard Business Review article (Sirkin, H. L., Keenan, P., Jackson, A. (2005). *The hard side of change management*. Harvard Business Review, 83, 10 p108-118). Aspects of each element are scored from 1-4 and the total score indicates likelihood of success. Using the tool also shows which aspects are problematic and perhaps modifiable to increase the chances for success.
2. Second, staff participated in half-day team training. The training included nurses, physicians, scrub techs, housekeeping, and unit clerks.
3. The third step was to "hardwire" the changes in by jointly developing communication and other tools to support the teamwork. All-in-all, the group developed seven tools (Universal Protocol; OR Checklist; Huddle; Family Birth Center RN report sheet; Mother-Baby Unit RN report sheet; postings of RN assignments; NICU briefing "Gimme 5") and are developing seven others, including Team agreements, ED to L&D handoffs, charge nurse to charge nurse report. See attached for examples of the OR checklist and Huddle.
4. The last step includes regular on-going audits designed to validate competency, discover educational needs, identify individual team members who are having difficulty, and reinforce the change. As the multidisciplinary groups developed the tools, they experienced a high degree of team activity. However, once the multidisciplinary group work ended, silos began to reform. To counter this natural and expected tendency, senior and clinical leaders are planning, in addition to the audits, regular multidisciplinary meetings and continued multidisciplinary work on tool development and communication.



For more information, contact Judy Marvin, MD judy.marvin@salemhospital.org

I cannot say whether things will get better if we change; what I can say is they must change if they are to get better.

— Georg Christoph Lichtenberg (1742 - 1799) [Return to Top](#)

Journal Brief: [Predicting Adverse Events](#)

A number of reports the Commission has received have indicated that some delay in response to a patient's changing condition was a contributory factor in the event. Addressing patients' deteriorating health status before it is too late is the basis for development of [Rapid Response Teams](#) (RRT). In addition to responding to concerns of staff or family regarding patient condition, some RRTs have expanded into assessments of patients recently transferred out of intensive care. Some will also ask staff if they have concerns or questions about any other patients. The ideal, of course, would be to be able to identify patients at risk for adverse events prior to the event or very early as their condition worsens. This study looked at what might predict adverse events in recently transferred ICU patients. In addition to two physiologic indicators, an interesting finding in this study suggests that a more qualitative indicator, intensity of nursing care, may also be an important marker for adverse event risk.

Chaboyer W, Thalib L, Foster M, Ball C, Richards B. (2008). Predictors of adverse events in patients after discharge from the intensive care unit. [American Journal of Critical Care](#). 17, p255-263.

BACKGROUND: Patients discharged from the intensive care unit may be at risk of adverse events because of complex care needs.

OBJECTIVE: To identify the types, frequency, and predictors of adverse events that occur in the 72 hours after discharge from an intensive care unit when no evidence of adverse events was apparent before discharge.

METHODS: A predictive cohort study of 300 patients from an adult intensive care unit was undertaken. An internationally accepted protocol for chart audit was used. Frequency of adverse events was calculated, and logistic regression was used to determine independent predictors of adverse events.

RESULTS: A total of 147 adverse events, 17 (11.6%) of which were defined as major, were incurred by 92 patients (30.7%). The three most common adverse events, hospital-incurred infection or sepsis (n = 32, 21.8%), hospital-incurred accident or injury (n = 17, 11.6%), and other complication such as deep vein thrombosis, pulmonary edema, or myocardial infarction (n = 17, 11.6%) accounted for 44.9% (n = 66) of all adverse events. Two predictors, respiratory rate less than 10/min or greater than or equal to 25/min and pulse rate exceeding 110/min, were significant independent predictors; requiring a high level of nursing care at the time of discharge was a significant predictor in univariate analysis but not in multivariate analysis.

CONCLUSION: Taking, recording, and reporting vital signs are important. Nursing care requirements of patients at discharge from the intensive care unit may be worthy of further investigation in studies of patients after discharge. [Return to Top](#)

Heard on the Net: Patient-Owned Equipment

Questions continue about the acceptability of patients coming into the hospital and bringing with them medical equipment they use at home (e.g. respiratory equipment – CPAP/BiPAP, and infusion devices). While it may seem of little consequence, since patients manage the equipment themselves at home, their use of personal medical equipment in the hospital comes with some risk. A Virginia hospital described a situation in which a patient on an IV medication that needed to infuse without interruption was admitted to the facility; interruption of infusion risked a stroke for the patient upon resumption of the infusion. Because of various situational factors, assuring availability of the medication was difficult. Here in Oregon, the issue has arisen as well. The Commission has received a report last year involving use of a home device with which the staff was unfamiliar.

Patient injury and hospital liability are two important concerns surrounding patients' use of personal medical equipment while hospitalized. It is essential to consider a number of factors that can influence risk in this situation. These include: staff competence with the equipment, who will manage the equipment and any medications, availability of any medications, initial evaluation for safety and function, compliance with guidelines for maintenance of equipment in clinical areas, cleaning to remove bacterial contaminants, means for keeping the equipment with the patient, and assuring that these factors are considered prior to admission when possible.

Patients and their families also need to understand the complexities involved in bringing personal equipment into the hospital. Information for patients regarding hospital use of home medical equipment is available from ACCE Health Technology Foundation. Their [Patient Safety Resource Center](#) has a brochure for patients answering the question: Can I take my home medical device with me to the hospital? The brochure is available in both [English](#) and [Spanish](#). [Return to Top](#)

In the News: NYC Hospitals Lower Infection Rates

The NY Times reported that New York City's Health and Hospital Corporation has been successful in reducing central line infections by 55% and ventilator associated pneumonias by 78% in 2 ½ years. (See the [article](#)). The hospitals in the system implemented a series of checklists used in a number of different care situations. Similar to what occurs with pre-flight checklists in airplane cockpits, each item on the checklist is noted as completed as the steps of the procedure are performed. [Return to Top](#)

From the Commission

North Star Goal – We are continuing to refine the measures for the Oregon's North Star Goal. Jim Dameron, the Commission's Administrator, is talking with the medical and hospital associations. They are providing helpful input, actively engaged in assuring accomplishment of the North Star Goal – *Oregon will have the safest health care system in the country by 2010.*

Reporting Program – Web based reporting is coming closer to reality as the reporting form is now finalized. The next step is to test the reporting method and website. Please contact me if you have a report to submit and are interested in testing the new system. I can be reached by [E-mail](#) or phone (503.224.9227).

Reports Received – In May 2008 the Commission received seven reports of adverse events, including one death, four serious, and two less-serious events. Communication was noted in all of the reports as a contributing factor and handoff/shift reports was an issue in six out of the seven events.

[Return to Top](#)

Upcoming Events

The next meeting of the Oregon Patient Safety Commission will be Tuesday, July 1, 2008 at the Wilsonville Training Center of Clackamas Community College, 29353 SW Town Center Loop East, Wilsonville OR 97070; meetings run 12:30 to 3:30 p.m. [Return to Top](#)

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